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ABSTRACT

A social science perspective is offered on the educational challenge of fostering students' independence while cultivating their abilities to coordinate with others. Rejected are the alternatives of reinforcing the values of American society or permitting free reign to individual development. Educators are reminded that, since their role is to develop as many different human potentials as students manifest, no one dimension of achievement should be canonized. The need for reciprocity in order for individuals to function autonomously is identified as an educational message that must be communicated through teachers' behaviors as well as verbally. The author urges teachers to expose themselves to peer criticism to insure adequate modeling for students. A view of education as an ongoing experiment is advocated to guard against authoritarian rigidity. However, teachers are cautioned to take student evaluations of relevancy primarily as statements of the students' stage of development rather than of the validity of the course content. Achievement of the above goals is seen to require revision of the roles currently adopted in educational institutions. (GW)

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EDUCATION, BEHAVIOR, AND EXPERIMENTATION

Mary E. Bredemeier, Ed.D
Associate Professor of Education
Montclair State College

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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BIOGRAPHICAL SKETCH

Dr. Mary E. Bredemeier, Associate Professor of Education at Montclair State College, is currently on sabbatical in North Truro, Massachusetts, where she is co-authoring a sociology of education text.

Dr. Bredemeier spent many years in the public schools as teacher and guidance counselor, and she has taught at Finch College in New York City and at Douglass College, Rutgers University, Although her recent studies and current work are in the sociology of education, she holds New Jersey certification to teach home economics, English, social studies, general science, and art, and she is also certified in guidance and administration.

Her dissertation, (Teacher-Student Transactions and Student Growth, Rutgers University, 1973) was a study of the relationship between teacher-student interactions and student growth in reading in the fifth and sixth grades of a large New Jersey school system. A report of the portion of that study which replicated parts of the Coleman and Rosenthal studies is scheduled to appear in a forthcoming issue of Education; it is entitled, "Revisiting Coleman and Rosenthal With Growth Scores."

A short reappraisal by Dr. Bredemeier of the major theses in John Holt's work, "Revisiting John Holt," appeared in the Spring, 1975, issue of Teacher. She is the author of a textbook in labor problems, The Worker in Modern Society, published in 1963 and revised in 1973.

She is married to Dr. Harry C. Bredemeier, Professor of Sociology at Rutgers University, with whom the text, Education and Social Systems is being coauthored. They have previously coauthored an article, "A Perspective on Human Care Systems," in the Montclair Education Review, January, 1973.

The Interdependence-Autonomy Dilemma and Education

Ralph Linton (1955:11) — Men are anthropoid apes trying to live like termites.

Ernest Becker (1973:26) — Man has a symbolic identity that brings him sharply out of nature.

John Dewey (1939:17) — The central problem of an education based on experience is to select the kind of present experiences that live fruitfully and creatively in subsequent experiences.

Charles Silberman (1970:10)

> ...what is mostly wrong with the public schools is due not to venality or indifference or stupidity, but to mindlessness.

In my long (30 year) experience as public school teacher, guidance counselor, and teacher of potential and active teachers in a School of Education, the one topic I've found educators to regard as most "impractical" is philosophy. Educators are reluctant even to discuss questions of "purpose," or to examine their goals in more than a superficial way. Yet the quotations above, and most of the penetrating examinations of the ills of American education, indicate that a necessary (if not sufficient) condition for doing anything about those ills is a reexamination of the question of purpose. I offer the following argument:

Any "reform" which fails to start from certain basic facts of the human condition is as likely to have "bad" as well as "good" consequences, either now or in the long run; and that failure, as I hope to make clear, is the problem with many current reform proposals.

The "reform" advocated here is not new to readers of Dewey - it is toward "experimental" education. But the rationale is rooted in social science more than philosophy, and I think it offers a fresh perspective on some old ideas. The four quotations above set the theme. The Linton and Becker quotations suggest that the fundamental problem for human beings is how to deal with their interdependence - their need for coordination - while at the same time cultivating their autonomy.

Schools are the institutions specifically designed to deal with this problem in the "societally-approved" way. The quotation from Dewey makes us aware of the complexity of the task and the traps of shortsightedness; and Silberman's observation suggests that we have chosen the easy way out, by refusing altogether to confront the problem.

The centrality and difficulty of the coordination-autonomy dilemna is dramatically emphasized by the two polar failures to solve it optimally: on the one hand, by such great preoccupation with coordination that autonomy is sacrificed; on the other hand, by such great preoccupation with autonomy that coordination is sacrificed. I shall use conventional political labels to refer to the first departure from an optimum solution as the "Rightist: deviation, and to the second as the "Leftist" deviation.[1]

Some Facts of the Human Condition

One fact we know about the human condition is that the only way

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[1] I recognize that some "Left" ideologies are not much different from the "Right" in thoroughly subordinating any kind of individuality to the collectivity. As I use the term "Leftist" here, it refers to the cult of "spontaneity," "do your own thing," "turn on, tune in, drop out," as well as to the cult of individualistic competitiveness in the market. The "market" and "spontaneity" ideologies are often seen as different, but their major difference is in terms of the "do your own thing" goals individuals are enjoined to seek - material success on the one hand and self-indulgence on the other.

available to people to solve their coordination problem is through "social" systems;" that is, through roles and statuses with interdependent and more-or-less clearly defined rights and obligations. Roles and statuses place limitations on autonomy for the sake of coordination; but at the same time they are closely linked to the very "identity" in terms of which people seek autonomy.[2]

However offensive the terminology may seem to "humanistic" educators (I insist I am one of them), our social systems are our "Skinner Boxes" which largely determine which behaviors get reinforced and which do not - or which ones bring punishments (i.e. "costs").[3] The critical importance of understanding this fact is that it reveals the unrealism of expecting people to change their behavior significantly without changing the environments in which they must function. It makes clear the necessity for would-be reformers to concentrate first on what behaviors they want to elicit from others and stop kidding themselves that this isn't what they are trying to do. Then the second task is to create the school and classroom environments which reinforce the "right" behaviors, attitudes, and values. It is true, as those who would abandon formal schooling tell us, that schools are not necessary for people to learn. People will indeed learn whatever their environments teach them. But the major problem with many "free the children" approaches as "reform"

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[2] For an excellent discussion of this point, see Goffman (1961).

[3] The essential difference between behaviorists and humanistic educators is not what many humanists think it is. The two groups tend to concentrate on different goals and they use different jargon; but both are change agents (or they're wasting their time), and they both "structure" the learning environment. Their work is complementary rather than conflicting.

solutions is that they rest on questionable premises about the human condition. As McCracken (1973:14-15) has pointed out in a penetrating analysis of John Holt's (1964, 1967, 1972) prescriptions for educational reform, "There is no evidence from history or behavioral science to indicate that man's capacity for learning truth, good habits, and sound values is any greater than his capacity for learning falsehood, bad habits, and deplorable values."

Holt and other critics are right that the values reinforced in American schools are those of American society: individualism, competition, merit, independence, equality of opportunity, material consumption, and the capacity to play the central societal roles students are "destined" to play;[4] and they are right that such a system has many "losers." But, to repeat: rejection of materialistic individualism for self-actualizing approaches which ignore interdependence or refuse to see it as a problem is simply to opt for a slightly different "Leftist" deviation from the optimum solution.

Why is the "doing your own thing" answer no answer? It is because those "symbolic identities" which bring us out of nature and give us a sense of "self" also make us vulnerable to what Merton (1957) so aptly labelled, "the imperious immediacy of our own interests."[5] It is simply

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[4] For excellent analyses of the way American schools function as "sifting and classifying" agencies for the allocation of person-power, see Parsons (1959) and Gintis and Bowles (1973); and for a contrast between "sifting and classifying" schools and schools which "nurture," see Bredemeier (1968).

[5] For further examination of the problems of coordinating interdependent persons in the face of their immediate autonomous interests, see Hardin (1968), Crowe (1969), Olson (1965), and Schelling (1971). For an interesting, though depressing, analysis of our planetary interdependence and the prospects for our descendents, see Heilbroner (1974).

not easy for us to mind the rights of others or to take the long view. In another phrase of Merton's,the temptation is always to engage in "moral alchemy." What those who succumb to the temptation know is, for example, that a verb such as "to be firm" is always conjugated (Merton, 1957:428):

I am firm,

Thou art obstinate

He is pigheaded

It is exactly that temptation which it should be the function of schools to inoculate against, but not by going to the opposite extreme of demanding individual autonomy altogether.

The Functions of Educators Revisited

The central task of education, as Gray (1968) has put it, is to develop in people a "sense of community" and "healthy individuality" while avoiding the extremes of "mindless collectivism" (the "Rightist" deviation) on the one hand and "self-centered individualism" (the"Leftist" deviation) on the other. Educators are society's specialists in nurturing those capacities.

The chief inoculant against the trap of "Rightism" is bearing in mind that the people alive at any given time are manifestations of human potentials; we are all there is of the human race and therefore priceless. The chief inoculant against the "Leftist" trap is bearing sharply in mind that we are the trustees for future generations of all the cultural and biological potentialities of the human race.

Against the Right it is necessary to argue that individuals are entitled to become the best manifestations they are capable of becoming. Against the Left it is necessary to argue that individuals have a duty to do so, and to limit their autonomy in the light of their interdependence and trusteeship.

To nurture children and youth into becoming the best manifestations of human potentials they can become is to facilitate their development along the lines of what Rawls (1971) calls the "Aristotelian Principle." In his words,

> the Aristotelian principle runs as follows: other things equal, human beings enjoy the exercise of their realized capacities (their innate or trained abilities), and this enjoyment increases the more the capacity is realized or the greater its complexity. The intuitive idea here is that human beings take more pleasure in doing something as they become more proficient at it, and of two activities they do equally well, they prefer the one calling on a larger repertoire of more intricate and subtle discriminations. For example, chess is a more complicated and subtle game than checkers and algebra is more intricate than elementary arithmetic. Thus the principle says that someone who can do both generally prefers playing chess to playing checkers, and that he would rather study algebra than arithmetic. (p. 426)

Each individual is a different manifestation of human potentials, with different base-line abilities, and different interests in cultivating different ones of his or her abilities.

Moreover, no individual can cultivate all of his or her own abilities to the maximum level - not even all the ones he or she is interested in cultivating.

But here we encounter two inescapable human dilemmas: (1) Everyone can imagine all of the human potentials he or she might have been able to cultivate but is a manifestation of only a small fraction of them, even as potentials. (Half the population can never know what it is to be female, and the other half can never know the opposite.) (2) Everyone knows that he or she can cultivate to the fullest only a small fraction even of the potentials he or she does have: time and

energy devoted to the cultivation of one are time and energy not available to cultivating another.

The dilemmas are painful and not avoidable. The responsibility of educators is to help people to recognize and to block off the various ways of narcotizing and avoiding them,[6] and to facilitate each individual's cultivation of as many potentials as possible - up to the point at which further cultivation is not worth the time or effort; not beyond that point.[7]

This way of understanding the matter has some important implications for "educational reform." The first and perhaps most difficult for some contemporary reformers is that, given human differences, it is impossible to make everyone score equally well on any dimension of achievement you want to think of; and it is a flat-out rejection of humanism to try. Many attempted reforms suffer from that flaw: they are efforts to make everyone fit the same bed of "higher IQ" or some similar measure of a single human ability taken as "The" human ability worth cultivating.[8]

There is nothing wrong with high IQ's; they are fine. So is running a mile in three minutes, dancing like Martha Graham, and quarterbacking like Joe Namath, to mention only a few abilities. But to suppose

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[6] Two tempting ways of narcotizing the pain and pretending to avoid the dilemmas are on the one hand to suppress awareness that one has any potentials("I can't do anything"), and on the other hand to deny that any potentials besides the ones one develops are worth developing ("All that other stuff is absurd" - or "low brow," etc.).

[7] For elaboration of this point, see Rawls (1971·428)

[8] To say that "equal educational outcomes" is neither possible nor desirable is not to support the present system of allocating rewards. Space precludes a discussion of the principles which would govern the allocation of rewards in a "just" society. The most rational ones I have encountered are those of Rawls (1971).

that if you can't do any of those things there is something wrong with you and some "reforms" are needed, is to aim for the worst of all possible worlds.

Somebody will run a mile in three minutes and somebody will have an IQ of 190. Good for them. And good for all the rest of us if they do. For, since we are going to actualize only a small fraction of that small fraction of human potentials we have, our only chance of not having all the rest of them lost to us is to hope that others actualize them.

This last point is the second responsibility of educators in avoiding the "Rightist" trap - namely, to help students delight in, rather than be discouraged by, the superior abilities of others.

It is all too easy, however, to perceive youngsters' potentialities unrealistically, For instance, we can accept presently-demonstrated abilities, aspirations, and attitudes as evidence of potential; or we can under-appraise potential on the basis of stereotypes about class, sex, race, and ethnicity. The much-investigated phenomenon of enhanced performance due to heightened expectations[9] points to a third responsibility of educators to people as "manifestations." That is to make clear to them that they do have a duty to cultivate what potentials they have. It doesn't do for people not to "stretch their muscles" or not to "raise their sights as their actualized capacities grow" (Rawls, 1971:426) and it is one of the functions of education not only to facilitate their doing so but also to insist that they do so. That is what "Individualism" and "autonomy" must mean.

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[9] See Rosenthal and Jacobson (1968), Rist (1970) and Rosenthal (1973), for discussion of their research on the influence of teacher expectations on achievement. For a critique of Rosenthal, See Snow (1969), and Elashoff and Snow (1971).

But that is not enough. Educators must also teach students about their interdependence and structure their learning environments so they will become cooperators.

The first step, of course, is to see, and to get students to see, that in order for one to develop autonomously, one needs all those others to act responsibly. And they, of course, need reciprocity.

The optimum solution to the "coordination" problem requires that people can confidently expect of their role-partners certain behaviors. Concretely, the behaviors are, of course, enormously varied - from those lovers expect of one another to those passing motorists expect of one another. But common to all of them are certain general qualities which are necessary for an optimum solution. Let us call them respect, courtesy, and self-discipline.

The major departures from these optimum expectations fall, not surprisingly, into the same two categories of "deviation" identified above. On the Right of the optimum lie the dangers of demanding from others (let us speak of teachers vis-a-vis students as our prime concern) not respect, courtesy, and self-discipline but veneration, obsequiousness, and submission. On the Left lie the dangers of accepting rudeness, contempt, and self-righteousness. As Ausebel (1972:157) has observed, "Courtesy is another of our most valuable cultural assets that was overlooked in the frenzy of extending democracy to home and school."

Whether students learn arithmetic or not, they will learn to be respectful or venerating or rude; courteous or submissive or contemptuous; self-disciplined or obsequious or self-righteous. But the connection between subject-matter learning and these other learnings is even closer than that last comment suggests. Assuming that the subject

matter is sufficiently challenging to them, then it is courtesy, self-discipline, and respect toward the teacher and the other students that will maximize their chances of mastering it. Both the Right and the Left deviations will get in their way.

The Right deviation gets in the way because if a student is required to learn obsequiousness, he or she cannot be free to make plain any difficulty, problem, or malfunctioning experienced in the course of the "lesson." And if not, no remedies can be even thought of, let along tried. The Left deviation gets in the way because if a student is encouraged to be self-righteous or selfish or allowed to be contemptuous, there is simply no incentive for him or her to change.

Notice, though, that we are now in the realm of "interpersonal relations," "affectivity," "sensitivity," "expressiveness," "citizenship," and "teacher style." And notice how we got here. We got here out of a concern with the conditions necessary for "subject matter" mastery. We got to the importance of "respect" out of concern with ability-development. The "cognitive" and "affective" domains of knowledge are as hand-in-glove as autonomy and cooperation.[10]

But suppose you are a teacher and a student seems to you to be refusing to play by the rules of elementary civility.[11]

If you define a student as being rude or obsequious, the first thing to do is to check out the hypotheses (a) that you might be wrong (to the student, the behavior may symbolize respect); or, (b) that you

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[10] The "Hidden" curriculum (see Jackson, 1968) is, of course, the behavioral curriculum, and should be as important a part of teacher planning as it is of their subject matter planning.

[11] They are not easy rules. See Cuddihy, 1974.

may have caused the behavior.

Checking the Hypotheses

Viewing human social behavior as "exchange"[12] makes it easy for us to see that a necessary (though not sufficient) condition for getting respect, courtesy, and self-discipline from people is to give it to them. Nevertheless, the model-setting aspect of the teacher's role gets insufficient attention.

One way of being a good model is to demonstrate that you are a hypothesis-tester and a seeker after truth and honesty. In checking out whether you might be wrong, there then are two hypotheses you need to check. One is that the student meant respect; the other is that the student meant rudeness and you caused him or her to resort to it.

Note carefully, however, in the context of the second hypothesis, that it is only a hypothesis. The cliche that if a student is rude (or obsequious) the teacher "must have" caused it, is one of the slippery slopes to Leftism. Students may, for any of a great number of reasons beyond the teacher's control be mean, ornery, obnoxious, etc. and in need of thoroughgoing correction.[13] They may, for similar reasons, be fawning hypocritical bootlickers who need correction. There is nothing about childhood or adolescence that immunizes anyone against the pathologies people are subject to; and it is a crippling myth to think there is.

How can a teacher seriously check out the hypothesis (repeat: the

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[12] See Homans (1961).

[13] The problem of "correction" is a side issue to the major thrust of this paper. The best discipline is, I think, the experimental approach as briefly outlined here. For an excellent discussion of the correction of pathologies, see Hamblin (1971).

hypothesis) that he or she caused the rudeness or obsequiousness? It would be easy to reply that teachers should have enough self-respect, courage, integrity, calmness, and insight to do this automatically; but that wouldn't help much. Teachers are as vulnerable to the imperious immediacy of their own interests as the next person, and as likely to color things in their own favor. But one difference between teachers and "the next person" is that teachers are supposed to know these things. Knowing them, they should be willing - we dare say, eager - to arrange their environment so that it is most likely to elicit the appropriate response from themselves.

One reform this implies is that teachers must become more visible to other teachers in the practice of their profession, and that there should be institutionalized regular and frequent occasions on which teachers compare diagnoses of one another's behavior. It is simply too easy in the press of classroom activities to become victimized by one's immediate interests and anxieties; it is in fact unavoidable. The dictum that power corrupts and absolute power corrupts absolutely applies deeply in the case of student-teacher relations. It means simply that if you are protected from negative feedback, you cannot adjust your behavior to reality. For one's own sake, one needs an audience of peers. Put in another context, to emphasize the point, it is a hallmark of insanity that the ill person has arranged to protect himself or herself against negative feedback; the "hypothesis-testing" stance has been destroyed and one is therefore "corrupted."

What about the other hypothesis which needs to be checked - the hypothesis of "cultural misunderstanding?" Partly, an arrangement which makes the teacher's interactions visible can help in this

respect, also, not only by making available others whose interpretations can be pooled, but also by providing reinforcements for doing a very simple kind of hypothesis-testing - namely, asking the student.

To the degree that it seems strange to propose this, the strangeness is a commentary on the conventional state of teacher-student relations. And to the degree that it is hard to do, the hardness must lie in the fact that it would cost the teacher something. What could it cost?

It could only cost the sense of being authoritarianly venerated. It may be that that is a reward many teachers value and that foregoing it is a severe frustration.

The authoritarian need to be venerated stems from an insufficient sense of being respected, which is to say, from insufficient self-respect. It is importantly related to the low prestige of teaching and to the ambiguity of goals and uncertainty of means in teaching which make any situation ripe for the development of essentially magical rigidities of form. But it is more seriously related to the problem of the classroom as a "right-wrong answer" sort of place where the need to be <u>right</u> - to <u>already know</u> - is greater than the need to learn. The learning environment which would remove this threat and make cooperative behavior both possible and probable is an "experimental" one. What would it be like?

<u>An Experimental Approach</u>

The first step is to recognize that it is <u>not</u> known what is "the" most effective method of teaching, and <u>there is no</u> certain way of knowing when a student has reached his or her peak level of achievement. More precisely, it is known that such knowledge does not exist. What <u>is</u> known is that people will learn what their environments teach them; this

is why, no doubt, much is made of the point that much (most?) of what is learned is "caught," not "taught," But the ambiguities surrounding both goals and means prevent education from being like road construction or even like putting a man on the moon. It is more like searching for your glasses in a dark room; you try this, and then that, and then something else - all guided by certain "hypotheses" or "hunches" to be sure, but all completely tentative.

What needs to be done above all else is to make that fact the explicit and forever-reiterated centerpiece of educational practice for teachers and for students. They are, in actual fact, engaged in an ongoing experiment; and it is the experimental attitude about the whole process everyone needs to have.

If a student doesn't "get" something, what we have is a puzzle. No one knows why, for usre; and anyone who pretends to is being superstitious. The task is to solve the puzzle, and it requires a series of hypotheses-formulation (guess-articulation, if you like) and then a set of steps to try them out - on the part of both the student and the teacher.

The whole business required at the outset an admission of ignorance, which, in addition to being a plain acknowledgement of the facts, is a powerful inoculant against loss of self-respect for being wrong. "Being wrong" gets turned into the discovery that something which might have been the case, isn't. Discovering that brings credit, not blame.

The teacher, we further assume, is the authority about subject matter. The math teacher who does not understand the math he or she is being paid to teach, or is indecisive about which elements come before which

other ones is simply an imposter.[14] As to the methodology of helping the student to master the subject, the teacher's hypotheses might stand a better chance of being correct, but the student should have hypotheses too. In either case, it ought to be made clear to the student that they are only the best guesses at the moment, "and let's see if they work."

The need for the teacher to be "authoritative" (rather than authoritarian) is closely related to the much-discussed matters of "relevance" and of the so-called "discovery method" of teaching-learning.

Relevance and "Discovery Learning"

When a student who is learning a subject makes a statement about how "relevant" of "irrelevant" something is to the learning, or about the "relevance" of the subject itself, you learn something important about the student; and maybe something about the teacher; but nothing about the subject. And that is in no way a put-down of students who complain about "irrelevance."

The important thing you learn about the student is that that student is at a point in his or her development, at which the subject matter in question does not appear relevant. What you may learn about the teacher, or about yourself if you are the teacher, is that he or she or you have failed in either or both of two strategies: The strategy of having gained enough credit with the student so that he or she is willing to gamble a little on following you along because previous followings have, surprisingly enough, paid off; or the strategy of linking what you're doing to the student's real life experiences.

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[14] As Kozol (1973:80) put it, " It is just not true that the best teacher is the one who most successfully pretends that he knows nothing. Nor is it true that the best answer to the blustering windbag of the oldtime public school is the free school teacher who attempts to turn himself into a human induction fan."

It is necessarily the case that every teacher will fail in one or both of those respects with some students. Some students cannot give enough trust to a teacher to gamble, and some cannot get above, for a time, the imperious immediacy of their present concerns. Size and structure of the learning environment affect the ease with which trust is established.[15] In any case, all the teacher can do is to respectfully try all the ideas at his or her command.

A student's judgment of "irrelevance" should be regarded as a symptom of where the student is - and that, of course, must be taken very seriously. Many students dealing with anything at all abstract - or dealing with anything concrete in a way that required abstracting some of its aspects - are in a position analogous to that of Piaget's subjects before mastering the "conservation of quantity" or the "transformation of appearances."

In Piaget's (1952) classical set of experiments, children are shown two glasses of the same size with the same amount of water in them. Then one of the glasses is emptied while the child watches into a taller, thinner glass; and the child is asked which glass now has the most water. Until about age six or seven, children tend to say that the tall, thin glass has the greater amount. As Piaget says, they are captives of the appearance of things; they have not yet learned to "decenter their thought from their perceptions."

It is a striking phrase, probably applicable to most people who are being exposed to a new way of looking at things, or being asked to suspend for awhile their immediate preoccupations and contemplate geometry

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15 For an interesting discussion of this issue, see Diane Dvoky (1971).

or history. One can imagine any of Piaget's six or seven year olds explaining with more or less controlled impatience that a formula (for example) for the volume of water in a container is "irrelevant" to their perceptions. But - and this is the point, of course - their protests don't make it so; they show where the six or seven year olds are at. The teacher who takes that seriously other than as a sympton has simply been seduced back to the student's level.

A similar entrapment sometimes underlies unthinking enthusiasm for the "discovery method of learning" and for "free schools" or "open classrooms," all terms with different meanings for different users. What many approaches going under those labels have in common is an emphasis on "taking the child where he or she is" and allowing him or her to learn out of concrete, often self-chosen, experiences. At the extreme is Holt's recommendation,[16] of having adults just "get out of the way" to allow for something like "spontaneous maturation." (See Ausubel, 1972:116.)

There is much to be said for those approaches, realistically conceived as experiments. But what cannot be emphasized too strongly about all of them in the present context is that if it is taken literally, the idea of "spontaneous maturation" is a prescription either for leaving a student "where he or she is," or for leaving his or her development to chance.

I understand Dewey's emphasis on the close relationship between "education" and "experience" in the context of the model of a scientist who reports his or her findings by saying, in effect, "For such and such theoretical reasons, I exposed myself to the experience of first doing X and then doing Y, and then observing Z, which is why I'm

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[16] See my analysis of Holt: Bredemeier, (1975).

reporting that Z is true. If you don't believe me, just expose yourself to the experiences of X and Y, and see for yourself what happens." (The "scientist" teacher, may, of course, choose to let the student discover the relationship between X, Y, and Z; the merit in the "discovery" approach is that (a) the relationship may be understood better, and (b) the student may discover something new and very significant about the relationship.)

Such an experimental attitude also has the advantage of being a simulation of precisely the kind of attitude which needs to characterize human participation in all institutions, not only schools; they are all cooperative enterprises in which individual excellence contributes to everybody's welfare.

What blocks realization of that fact is that under prevailing conditions, the Name of the Game is not Let's See What Works Best to Maximize Potentials in a Condition of Interdependence. Rather it is either (a) Let's See Who is More Excellent Than Who Else in Fitting This, That, or Some Other Procrustean Bed, of curriculum or method; or (b) Let's All Fend for Ourselves, and Devil Take the Hindmost.

The difficulty in changing the conditions is a problem of role change. As Fairweather (1972:36) put it, cooperative programs (in American institutions) require a "radical revision in social roles - a change difficult to achieve because normal patterns of behavior would have to be radically changed."

For emphasis: "normal patterns of behavior" in American schools are not those of people engaged in an on-going social experiment with no one having anything but ignorance to lose by finding out a better approach; normal patterns of behavior are to protect investments in the Rightness of established routines at all costs. That is why "normal

patterns of behavior" tend also to what I have called "deviations to the "Right" or to the "Left" from the optimum solution to the coordination-autonomy dilemma.

To summarize, schools are learning places - like any other kind of place, indeed. Students in them may not learn what you and I think they ought to; and they may not learn what is measured in terms of cognitive achievement. But they learn something, even if it is "only" to hate the teacher, the school, and tests of cognitive achievement.

Among the things they inevitably learn, if they stay (as they must until age 16) is how to make out in whatever systematic ways the school solves the problems of economy, polity, integration, and motivation that exist in any system. They learn, inevitably, which ways are most advantageous to them (to them) of coping with the universal problem of coordinating interdependent people in the teeth of their autonomy. The ways they learn of "making out" in the American school system do not promote much awareness of interdependence or sense of community and they do not excite either intellectual curiosity or pleasure in the accomplishments of others.

The problems of changing institutionalized practice are formidable, but I don't think "The System" is as resistant to the experimental approach as many people believe. "Roles" always have some room for maneuverability, and "systems" are changed by people. Indeed, my own efforts to integrate social science theory and educational practice have been very much influenced by those few and scattered inspiring teachers I have been privileged as a supervisor to observe, who are out there practicing what I preach.

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